



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/197,993	11/23/1998	STEVEN EUGENE LOVETTE		1952
23990	7590	10/24/2003		
DOCKET CLERK P.O. DRAWER 800889 DALLAS, TX 75380			EXAMINER NGUYEN, DUSTIN	
			ART UNIT	PAPER NUMBER
			2154	

DATE MAILED: 10/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/197,993

Applicant(s)

LOVETTE, STEVEN EUGENE

Examiner

Dustin Nguyen

Art Unit

2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1 – 25 are presented for examination.

Response to Amendment

2. As per remarks, Applicants argued that (1) Gosling does not disclose verifying whether data stored in a storage device has deviated from an “initial state” of that data and use the virtual stack to inspect a “quantity of information” so as to “identify any deviation from the initial state and thereby detect corruption associated with the stack in the storage device”.

3. As to point (1), Gosling discloses a verifier tool to identify any instruction sequence that attempts to process data of the wrong type for such a bytecode or if the execution of any bytecode instructions in the specified program would cause underflow or overflow of the operand stack [col 3, lines 3-9]. Also, Gosling discloses the step of comparing the snapshot with the virtual operand stack state as a way of inspecting a “quantity of information” to “identify ... corruption” [col 3, lines 33-40].

4. As per remarks, Applicants argued that (2) Jones does not specifically disclose “quantity of information adjacent to the stack in the storage device”.

5. As to point (2), Jones discloses the limitation as mentioned in the previous Office Action. Furthermore, the claim limitation of "adjacent to the stack" can be viewed as pointer link to the next location of memory as mentioned in Jones reference.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gosling [US Patent No 5630066], in view of Simon L. Peyton Jones and Jon Salkild [Herein as Jones] [ACM Press New York, NY, 1990, The Spineless Tagless G-machine].

8. As per claim 1, Gosling teaches the invention substantially as claimed including the method for detecting corruption associated with a stack, the method comprising the steps of:

inspecting the quantity of information so as to identify any deviation from the initial state [col 10, line 34-46], and thereby detect corruption associated with the stack in the storage device [col 12, line 43-59].

Gosling does not disclose inserting a quantity of information adjacent to the stack in the storage device, the quantity of information having an initial state.

Jones discloses inserting a quantity of information adjacent to the stack in the storage device, the quantity of information having an initial state [page 195, col 1, lines 16-23].

It would have been obvious to a person skill in the art at the time the invention was made to combine the teaching of Gosling and Jones because Jones' teaching would allow to detect inconsistency of data memory management.

9. As per claim 2, Gosling discloses the initial state of the quantity of information represents a bit pattern [col 10, line 17-23 and col 5, line 51-55].

10. As per claim 3, Gosling shows the initial state of the quantity of information represents a processor readable address [col 11, line 48-58].

11. As per claim 4, Gosling shows the initial state of the quantity of information represents a processor readable instruction [col 11, line 1-10].

12. As per claim 5, Gosling discloses the step of adding data to the stack after inserting the quantity of information adjacent to the stack in the storage device [col 13, line 49-56].

15. As per claim 6, Gosling shows the step of recording the push operation after identifying any deviation from the initial state [col 13, line 57-59].

16. As per claim 7, Gosling shows the step of removing data from the stack after inserting the quantity of information adjacent to the stack in the storage device [col 13, line 16-27].

17. As per claim 8, Gosling discloses the step of recording the pop operation after identifying any deviation from the initial state [col 13, line 27-28].

18. As per claim 9, Gosling discloses the step of restoring the quantity of information to the initial state after identifying any deviation from the initial state [col 13, line 9-15 and col 13, line 41-48].

19. As per claim 10, Gosling does not disclose inserting a first quantity of information adjacent to a top of the stack in the storage device, and inserting a second quantity of information adjacent to a bottom of the stack in the storage device. Jones discloses inserting a first quantity of information adjacent to a top of the stack in the storage device, and inserting a second quantity of information adjacent to a bottom of the stack in the storage device [page 195, Figure 5 and col 1, lines 24-col 2, lines 15]. It would have been obvious to a person skill in the art at the time the invention was made to combine the teaching of Gosling and Jones, because Jones' teaching would allow to keep the integrity of data and to prevent underflow or overflow in the stack.

20. As per claims 11-19, they are apparatus claimed of claims 1-9, they are rejected for similar reasons as stated above in claims 1-9. Furthermore, Gosling discloses the use of elements and functions of the above being performed in a system [claims 10 and 11], which include a processor [Figure 3, item 257] and a storage medium for storing instructions that are readable by the processor [Figure 3, item 260].

31. As per claim 20, it is apparatus claimed of claim 10, it is rejected for similar reasons stated above in claim 10.

32. As per claims 21-25, they are rejected for similar reasons as stated above in claims 11-15. Furthermore, Gosling discloses the use of elements and functions of the above being performed in a computer program [col 9, line 34-40].

33. Applicant's arguments filed on 08/05/2003 have been fully considered but they are not persuasive.

34. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dustin Nguyen whose telephone number is (703) 305-5321. The examiner can normally be reached on Monday – Friday (8:00 – 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (703) 305-9678.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directly to the receptionist whose telephone number is (703) 305-3900.

Dustin Nguyen


ZARNI MAUNG
PRIMARY EXAMINER